SUREKEY EXAMINATIONS BOARD

PRIMARY SEVEN SUPER SERIES EXAMINATION

2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	EMIS No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

District Name: .....

Read the following instructions carefully:

1. Do not forget to write your **school** and **district name** on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **15 printed pages** altogether
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated: **"For Examiners' Use only"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn.No.	**MARKS**	**EXR'S NO.**
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

SECTION A: 40 MARKS

Answer **all** questions in this Section

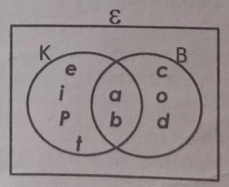
Questions **1** to **20** carry two marks each

1. Workout: $16 - 4$.

2. Round off 4613 to the nearest hundreds.

3. Workout: $5 - 1\frac{1}{4}$.

4. Use the Venn diagram below to find n(K n B)'.



5. Find the next number in the sequence:

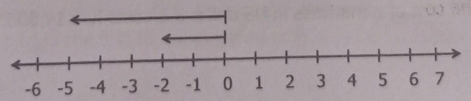
   11, 15, 21, 29, 38, ...

6. Using a pair of compasses, ruler and pencil only, construct an angle of 105^0 in the space below.

7. A car uses 4 litres of petrol every day. How many $\frac{1}{4}$ litre bottles of petrol does the car use in the day?

8. Simplify: $8 - 3(m + 5)$.

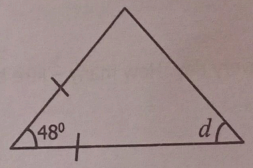
9. Write the mathematical statement shown on the number line below.



Turn Over

10. The total mass of 4 girls is 146kg. The average weight of three of them is 36.1kg. Find the mass of the fourth girl.

11. Find the size of angle marked d in the figure below



12. Solve for y: $3^y \times 3^2 = 27$.

13. Given the exchange rates below,

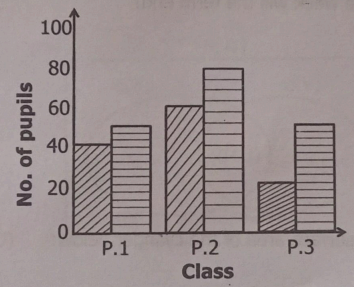
    1 *USD costs Ugsh.3,600.*

    1 *Ksh costs Ugsh.36.*

    Workout the cost of a mattress in US dollar if it costs Ksh.14,000.

14. Use distributive property to workout: $(8 \div 3) + (10 \div 3)$.

15. The graph below shows the number of pupils, boys and girls respectively in the Lower section of Habanomu Junior School.

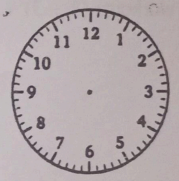


Express the number of pupils in P.2 as a percentange of the total number of pupils in Lower primary.

16. Trees are planted along a straight road at intervals of 10m. Find the distance from the first to the eleventh pole.

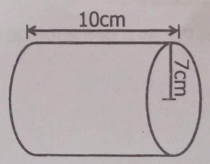
Turn Over

17. Use the clock face below to show 22 minutes to 11 o'clock.



18. Today is Monday, term three starts. It will end after 74 days from today. On which day of the week will the term end?

19. Calculate the total surface area of the cylinder below. (Use π as $\frac{22}{7}$)



20. The product of two numbers is 54. The LCM of the two number is 18. Find their GCF.

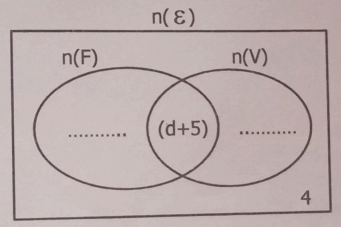
SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. In a market, 27 traders sell Fruits (F) only. (d+10) traders sell vegetables (V) only. (d+5) traders sell both Fruits and Vegetables, while 4 traders sell other items.

(a) Complete the Venn diagram below using the above information. (02 Marks)



(b) If 29 traders sell vegetables, find the value of d? (02 Marks)

(c) How many traders sell only one item? (01 Mark)

Turn Over

22. (a) Add: $1\ 2\ 1_{three}$ + $2\ 2_{three}$ (02 Marks)

(b) Given that $101_{k} = 1101_{three}$. Find the value of the base represented by letter **k**. (03 Marks)

23. A trader bought 120 mangoes at Sh.120 per mango and 30 oranges at Sh.400 each. He later sold each mango at Sh.150 and each orange at Sh.500. Calculate the percentage profit the trader made. (04 Marks)

24. Nantongo bought the following from the market.

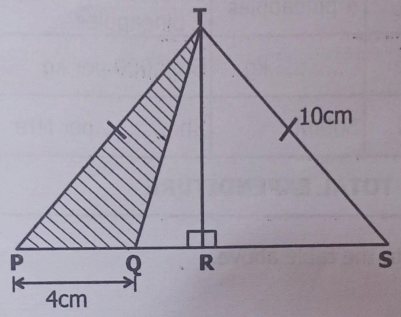
Item	Quantity	Unit Cost	Amount
Pineapples	4 pineapples	Sh.5,000 for every 2 pineapples	Sh.....
Rice	.....kg	Sh.8,000 per kg	Sh.24,000
Cooking oil	500ml	Sh. .....per litre	Sh.4,000
TOTAL EXPENDITURE			Sh. .....

(a) Complete the table above. (04 Marks)

(b) If Nantongo was given a discount of 10%, how much discount was she given? (01 Mark)

25. The interior angle of a regular polygon is 20% more than its exterior angle. Name the polygon. (05 Marks)

26. PST is an isosceles triangle. The area of the shaded part is $16cm^2$. Study and carefully use it to answer the questions that follow.



(a) Find the length of **QR**. (04 Marks)

(b) Workout the perimeter of triangle **PST**. (02 Marks)

27. (a) Using a pair of compasses, a ruler and a pencil only, construct a parallelogram PQRS where PQ = 6cm, angle SPQ = 120^0 and QR = 4cm. (04 Marks)

(b) Draw diagonal PR and measure angle PRQ. ..... (01 Mark)

28. (a) Solve for x: $\frac{3x}{5} + 7 = x - 9$. (03 Marks)

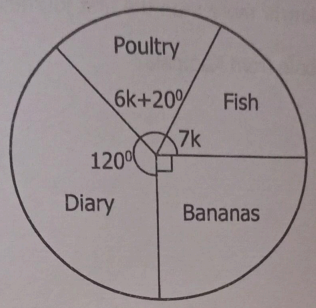
(a) Find the solution set for **t**: $2 - 2\mathbf{t} \leq 8$. (03 Marks)

29. (a) Workout: $3.61 - 0.89$ (02 Marks)

(b) Simplify: $\frac{3}{4} \div 1\frac{1}{2} - \frac{1}{4}$ (03 Marks)

30. Th

30. The Pie-Chart below shows how a farmer earns from his farm monthly.



(a) Find the value of k. (02 Marks)

(b) If he earns Sh.630,000 from diary and bananas. Calculate his monthly earnings. (02 Marks)

Turn Over

31. Sulaiman drove from Kampala to Mbale at an average speed of 72km/hr for $2\frac{1}{2}$ hrs. He then drove back to Kampala using the same route at a speed which was 18km/hr more than the first journey.

(a) How far is Mbale from Kampala? (02 Marks)

(b) Calculate Sulaiman's average speed for the whole journey.

(03 Marks)

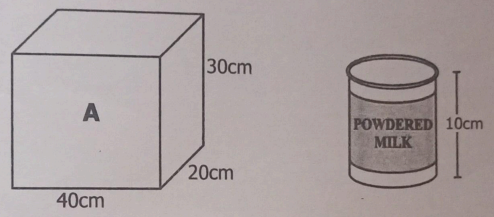
32. B
c
a
(a
(b

2km/hr
t a

Marks)

s)

32. Box (**A**), 40cm long, 20cm wide and 30cm high was packed with 4 small cylindrical tins of powdered milk of height 10cm. After packing all the tins, a space of 17840cm^3 remained in the box.



(a) Calculate the volume of each tin. (03 Marks)

(b) Find the radius of the tin. (Use as $\frac{22}{7}$) (02 Marks)

END